

6651 Series Surge Protector

6651C/1

6651C/3

Installation Instructions

Description and Operation

The 6651 C Surge Protector has been designed as part of a coordinated approach to prevent damage to electrical installations from transient overvoltages at the primary mains input/local distribution panel.

The surge protector provides protection from voltage spikes/transients that can occur between phases, phase to earth and phase to neutral thus providing protection in all possible modes. The surge protector is fitted with two stages of protection which are coordinated to ensure that if the first stage ceases to function, the second stage gives continuity of protection albeit at a reduced level, until a replacement is fitted. The protection status is indicated by a system of indicator lights as follows:

- Green** - Full Protection
- Red & Green** - Reduced Protection
- Red** - No Protection

Installation:-

Important: This product should only be installed by an electrician or other suitably qualified person. Ensure power is switched off before any installation work is undertaken.

The 6651 C is suitable for direct connection to a supply line fused up to 32A but can be connected to supply lines of higher fuse rating by the provision of series fuses (between protector and distribution panel) rated 16A min - 32A max (IEC269-2). If MCBs are used in place of fuses they should be of Type C.

Note: It is recommended that the 6651C is provided with some means of isolation in order to facilitate electrical system maintenance checks and unit replacement should this be necessary. For local distribution panels fitted with RCCD's the surge protector must be fitted in front of this unit otherwise operation of the 6651C could cause the RCCD to trip.

The surge protector is connected in parallel with the supply and therefore carries only the currents associated with the transient overvoltage. The cable is of 2.5mm² and is suitable for direct connection to a supply fused as previously specified. As the surge protector should be fitted as close as possible to the distribution panel, the cable supplied should be shortened as appropriate.

However if the only position for fitting requires a longer lead there is an internal connector block available.

Note: For three phase 3 wire + earth systems, neutral and earth leads must be connected together.

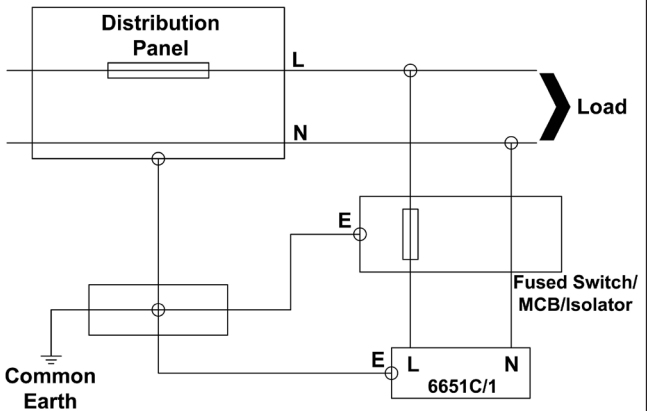
Maintenance:-

The 6651C has been designed to be maintenance free in service, requiring only periodic inspection of the status lights (especially following a thunderstorm or other known incidence likely to have caused a surge/transient). At yearly intervals, when convenient, a check should be made on all connections and tightened if required.

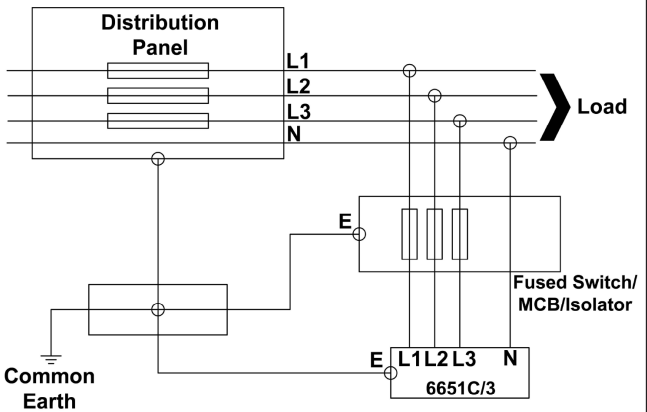
Important: In order to achieve the most effective protection all earth connections must be referenced to a common point.

The 6651C should be considered as part of a coordinated approach to transient protection and while protecting primary mains input/local distribution panel it should be remembered that any equipment connected after the unit is susceptible to transients that can occur at other points within the system.

Single Phase



Three Phase



Note: For three phase 3 wire + earth systems, neutral and earth leads must be connected together.

Mains Supply Voltage:

Single phase	230V RMS, 50Hz nominal
Voltage range	200-300V RMS, 40-60Hz range
Three phase	400V RMS, 50Hz nominal
Voltage range	250-500V RMS, 40-60Hz range
	Star - 4 Wire + Earth
	Delta - 3 Wire + Earth

Mains Supply Current:

The 6651C is connected in parallel with the supply, so the line current of the system is not conducted through the 6651C.

Leakage Current:	250µA Phase to Earth (150µA per phase for LED indication)
Max Surge Current:	10kA (8/20 µS waveform)
Response Time:	<10nS
Operating Temperature:	-40°C to +70°C
Operating Humidity:	0 to 95% non-condensing
Indicator Lights:	Green - full protection

Red & Green - reduced protection

Red - no protection

Case: Powder Coated Steel

Type (BS EN 61643-11/12) II

IP Rating: 54

Dimensions (mm): 182x81x61 (LxWxD)

Weight(g)

Single phase 900

Three phase: 1100

The information contained in these installation instructions is for use only by installers trained to make electrical power installations and is intended to describe the correct method of installation for this product. However PO Devices has no control over the field conditions which influence product installation. It is the user's responsibility to determine the suitability of the installation method in the user's field conditions. PO Devices' only obligations are those in PO Devices' standard Conditions of Sale for this product and in case will PO Devices be liable for any other incidental, indirect or consequential damages arising from the use or misuse of the products.

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